HISTORY OF 10 CFR 20.2002 IN NRC'S REGULATIONS AND ITS USE BY LICENSEES

10 CFR 20.2002 and its predecessors, 10 CFR 20.304 and 20.302, have been in the U.S. Nuclear Regulatory Commission's (NRC's) regulations and available for use by licensees since 1959. 10 CFR 20.302 was used to license the early low-level radioactive waste (LLW) disposal sites before 10 CFR Part 61 was promulgated in 1982. Part 61 disposal facilities are designed for the disposal of all but the most highly radioactive LLW. To ensure safety and the protection of the environment, Part 61 provides detailed requirements for the performance of LLW disposal facilities, along with specific siting, design, operations, and closure requirements. Although most of the radioactivity in LLW generated by NRC licensees is disposed in facilities licensed under Agreement State regulations compatible with and/or similar to Part 61,10 CFR 20.2002 continues to be available for use by licensees for wastes that are a small fraction of the Class A limits contained in Part 61, and for which the extensive controls in the Part 61 are not needed to ensure protection of the public health and safety and the environment. Thus, 10 CFR 20.2002 provides for more risk-informed disposals of these low-end materials.

NRC has received more than 100 requests in the last 30 years for 10 CFR 20.2002 approvals. Although about two-thirds of these were for onsite disposals, the trend in recent years has been for fewer onsite and more offsite disposals. Since 2000, NRC has received 20 requests for 10 CFR 20.2002 alternate disposal authorizations, 17 for offsite disposal (see Attachment 3 for a listing of these requests). Fourteen have been granted, and 6 are currently under review. Those granted include 5, from nuclear power plants, involving the offsite disposal of large quantities (tens of thousands of cubic meters) of very low levels of radioactivity in permitted landfills. Only two of these authorizations, however, have been used, both from the same facility (Big Rock Point). Other types of 10 CFR 20.2002 approvals have included; (1) disposals on the licensees' property; (2) disposal of short-lived waste in oil wells; and (3) disposal of incinerator ash from universities and research laboratories in landfills[1]. Concentrations are typically below those that would cause a dose in excess of 1 mrem/yr if released for any use and without any controls,[2] and are a fraction of the Class A limits for LLW contained in Part 61.

10 CFR 20.2002 requests may be for either disposal offsite, typically at a municipal solid waste or hazardous waste landfill, or on a licensee's site. NRC does not expect to address offsite disposals after they occur. Onsite disposals, however, are addressed by the licensee and NRC at decommissioning to ensure that when the license is terminated, the site meets the criteria in

[1]In accordance with NRC's Policy and Guidance Directive 8-10, "Disposal of Incinerator Ash as Ordinary Waste," January 1997.

[2]As defined in International Atomic Energy Agency Safety Guide RS-G-.17, "Application of the Concepts of Exclusion, Exemption, and Clearance."

the license termination rule in Subpart E of 10 CFR Part 20.[3] Since they are onsite, they are also under the licensee's control throughout the time the license is in effect. These differences between onsite and offsite disposals likely affect the level of public interest.

Many 10 CFR 20.2002 disposals are similar to other disposals of other radioactive materials in landfills and hazardous waste facilities that occur routinely in the U.S. Among the authorized disposal facilities of radioactive materials in the U.S. are hazardous waste facilities, in California and Colorado, which accept radioactive wastes in concentrations up to 2000 pCi/gram total radioactivity, and Michigan solid waste landfills which are allowed to accept waste containing up to 50 pCi/gram of radium-226. In addition, Louisiana allows for oilfield waste containing up to 30 pCi/gram radium-226 to be disposed of in non-hazardous oilfield disposal facilities. The U.S. Ecology Idaho facility and the Waste Control Specialists facility in Texas, in addition to accepting Atomic Energy Act materials, also accept naturally occurring radioactive materials.

[3]The staff recently published draft guidance in NUREG-1757 Supplement 1, "Consolidated NMSS Decommissioning Guidance: Updates to Implement the License Termination Rule Analysis," that describes steps the licensees needs to take to ensure that these disposals are accounted for in the subsequent decommissioning and release of the site under the license termination rule in Subpart E of 10 CFR Part 20. Public input was obtained through an April 2005 workshop and a Federal Register Notice.